

In the Claims:

- 1 (herein amended) - Confocal optical device for illuminating at least one ~~illuminated~~ point (309) using an illuminating beam coming from an illumination source (300) and focused
5 on ~~said the illuminated~~ point, and for focusing on a microscopic hole (306) associated with the illuminated point a beam to be detected coming from the illuminated point, comprising:
- a beamsplitter (321) passed through by a first beam (FD) and reflecting a second beam (FE), one of the first and second beams being the illuminating beam (FE), and the other being the beam to be detected (FD), ~~the beamsplitter being exchangeable, the device being~~
10 ~~characterised by the following facts:~~
- ~~it comprises~~ a redirection mirror (320) substantially parallel to the beamsplitter and attached to the beamsplitter, the assembly consisting of the beamsplitter and the redirection mirror being exchangeable, reflecting the second beam,
~~the beamsplitter and the redirection mirror are attached to one another,~~
15 ~~so that the redirection mirror and the beamsplitter together constitute a splitter unit, intended to be exchanged all in one piece at the time the beamsplitter is exchanged.~~
Characterised by the following facts:
- it is adapted for illuminating a plurality of points using a plurality of illuminating beams and for focusing on a plurality of microscopic holes the beams to be detected coming from
20 the plurality of illuminated points, and
- the redirection mirror is disposed in order to reflect the second beam.

- 2 (previously presented)- Optical device according to Claim 1, characterised by the fact that said beamsplitter and redirection mirror are placed in an afocal zone, in which the
25 illuminating beam and the beam to be detected are substantially parallel.

- 3 (cancelled)- ~~Optical device according to either of Claims 1 or 2, characterised by the fact that it comprises means (801) for illuminating a plurality of illuminated points using a plurality of illuminating beams, and for focusing on a plurality of microscopic holes (806)~~
30 ~~a plurality of beams to be detected each coming from an illuminated point, said beamsplitter being passed through by a plurality of first beams, said beamsplitter and redirection mirror reflecting a plurality of second beams, said first beams being the illuminating beams and said second beams being the beams to be detected, or said first~~

beams being the beams to be detected and said second beams being the illuminating beams.

4 (herein amended) - Optical device according to ~~one of Claims Claim 1 to 3~~, characterised
5 by the fact that the beamsplitter (602) and the redirection mirror (603) are placed on two
opposite faces of a parallel window (600).

5 (previously presented)- Optical device according to Claim 4, characterised by the fact
that the beamsplitter and the redirection mirror are made by depositions of thin coatings on
10 the parallel window.

6 (herein amended)- Device according to ~~either of Claims claim 4 or 5~~, characterised by
the fact that the parallel window is disposed so that

- the optical path of the second beam (FE) comprises successively a first passing-
15 through of the parallel window, a reflection on a first mirror, a second passing-through of
the parallel window, a reflection on a second mirror, and a third passing-through of the
parallel window, one of the first and second mirrors being the redirection mirror and the
other being the beamsplitter, and

- the optical path of the first beam (FD) comprises a passing-through of the parallel
20 window and a passing-through of the beamsplitter.

7 (herein amended) - Device according to ~~one of Claims claim 1 to 6~~, characterised by the
fact that said beamsplitter is a dichroic mirror and said redirection mirror is a totally
reflective mirror.

25

8 (herein amended) - Device according to claim 1, ~~one of Claims 1 to 7~~, characterised by
the fact that said beamsplitter is a beamsplitter that is neutral as regards wavelength and
said redirection mirror is a totally reflective mirror.

30 9 (herein amended)- Device according to claim 1 ~~one of Claims 1 to 8~~, characterised by the
fact that it comprises a plurality of splitter units each comprising a beamsplitter and a
corresponding redirection mirror, and by the fact that it comprises a means for alternately
placing one or another of the splitter units on the optical path.

10 (previously presented)- Device according to Claim 9, characterised by the fact that said means for placing is a slider.

- 5 11 (previously presented)- Device according to Claim 9, characterised by the fact that said means for placing is a wheel turning about an axis and on which the splitter units are mounted.

- 12 (herein amended)- Beamsplitter ~~Splitter~~ unit intended for a confocal optical device
- 10 according to Claim 1, characterised by the fact that it consists of a parallel window,
- a first face of said window comprising a first area on which a dichroic or partially reflective mirror is made by deposition of at least one thin coating, intended to be passed through by a first light beam and to reflect a second light beam,
 - the first face of said window comprising a second non-reflective area, intended to be
- 15 passed through by the second light beam,
- a second face of said window, opposite to the first face, comprising a third area on which a redirection mirror is made by deposition of at least one thin coating, intended to reflect the second light beam,
 - the second face of said window also comprising a fourth non-reflective area, intended to
- 20 be passed through by the first light beam and by the second light beam.